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**FIRST WORLD PROBLEMS, DEVELOPING
WORLD IMPACTS:
AN ASSESSMENT OF THE ADEQUACY OF
THE LAW ON SHIPBREAKING**
Shannen Trout¹

Abstract

Shipbreaking, or recycling, is a potentially destructive practice reflecting many dimensions to the modern sustainable development debate. It engages a suite of legal issues and has prompted discussion between professionals concerned with the environment, the economy and workplace ethics. This article seeks, first, to identify the breadth of issues that arise within the shipbreaking industry; and then proceeds to discuss the legal frameworks that regulate the trade, their effectiveness or otherwise; and concludes that the overall efforts to impose legislative or other regulatory systems, internationally and domestically, are far from what is needed in order to reform shipbreaking into a safe, sufficiently economical and environmentally sustainable industry.

Keywords: Basel Convention, Coastal Environments, Hong Kong Convention, Human Rights, Pollution, Shipbreaking, Sustainable Development.

Introduction

Shipbreaking in less developed countries (LDCs) has been a global environmental and social issue since the industry moved to the beaches in South Asia during the 1980s. It was more cost-effective for ship-owners to shift operations from well-regulated developed countries to South Asia, predominantly Bangladesh, India and Pakistan. Here health and safety standards are nominal and the environment has little standing when set against basic human survival. The practice in Bangladesh involves beaching vessels and then manually stripping them of valuable materials. It is an important recycling process creating significant revenue, and employing numerous labourers; however, it is a considerably dangerous job when carried out by hand as more often than not the ships still contain explosive and/or toxic materials. Lack of

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workplace protection is a serious concern for anyone involved in the process; and in addition there is a legacy of long-term and extensive environmental pollution. This has impacts on the health of coastal communities as well as the depletion of artisanal fisheries and the reduction of biodiversity in areas adjacent to the shipbreaking yards.

International legal provisions relating to hazardous waste have been applied to the industry, and issue specific international norms are developing, albeit slowly. In-country laws are often ineffective due to a lack of enforcement capability or political will. This article assesses the extent to which the legal regimes are able adequately to address the environmental, economic and social dimensions of the trade. Examining international, regional and national measures it concludes that current practices are unsustainable and that the consequences of inadequate legal regulation places a significant and unwelcome burden on coastal communities in developing nations.

1 Issues within the Shipbreaking Industry

It is submitted that the industry threatens the environment as well as the health of those involved in it. The Universal Declaration of Human Rights states that ‘everyone has the right to a standard of living adequate for the health and well-being of himself and of his family.’² Article 23 states ‘everyone who works has the right to just and favourable remuneration ensuring for himself and his family an existence worthy of human dignity, and supplemented, if necessary, by other means of social protection.’ The Bangladesh and Indian experiences have been identified by the ILO as having unacceptably high fatality rates, making it one of the most dangerous occupations in the world,³ where these basic human rights are far from protected and exploited to imaginable measures. In addition to these rights are the Sustainable Development Goals (SDG’s): to which India and Bangladesh are signatories. Goal 14 is entitled ‘Life below water’,⁴ with its sole aim being to ‘conserve and sustainably use the oceans, seas and marine resources’. Goal 8 concerns ‘Decent work and Economic Growth’,⁵ prioritizing the need to push for technical innovation, sustainable economic growth and higher levels of productivity. These SDG’s are part of a global sustainable development agenda, with objectives to reduce poverty and inequality alongside seeking to reduce climate

² Universal Declaration of Human Rights 1948, General Assembly Resolution 217 A, Article 25.

³ International Labour Organisation, ‘Shipbreaking: A Hazardous Work’, http://www.ilo.org/safework/info/WCMS_110335/lang--en/index.htm, February 2017

⁴ UNDP India, Sustainable Development Goals, <http://www.in.undp.org/content/india/en/home/post-2015/sdg-overview/goal-14.html>, April 2017

⁵ UNDP Bangladesh, Sustainable Development Goals, <http://www.bd.undp.org/content/bangladesh/en/home/sustainable-development-goals/goal-8-decent-work-and-economic-growth.html>, April 2017.

change – it is questionable how far any of the 17 goals set out in the 2030 agenda are met in relation to the shipbreaking industry.

By relocating from developed countries to the lesser developed countries of India and Bangladesh it has become a dangerous occupational and environmental hazard.⁶ Its significant growth since the 1980's has meant that 'inappropriate management practices and inadequate plans'⁷ are the norm. Occupationally, the issues are easy to identify even to the untrained eye; spending a short amount of time browsing the World Maritime News website it becomes clear that there are many instances of reports on incidents that have happened on these hazardous yards. At the beginning of the year five workers were found dead in Gadani on a shipbreaking yard with a further eight people reported missing⁸ after a liquefied petroleum tank exploded whilst workers were dismantling a ship. Another worker was reported dead in 2016 after he was struck on the head with a large iron piece at a Bangladeshi shipbreaking yard,⁹ in an attempt to hide the death from the authorities the yard owner refused to release the body and only did so after worker protests. The official figures are reported to 'substantially underestimate the reality'¹⁰ of the fatalities in both Bangladesh and India, with local fisherman and workers telling journalists stories of how 'severely injured workers are sometimes dumped at sea and left to drown'.¹¹ By way of an example, an explosion on an oil tanker, the TT Dena in May 2000, prompted a comment from a trade unionist that 'the yard claimed that 14 had been killed we say 60. The workers told us that bodies were taken offshore and sunk with stones.'¹²

In Bangladesh compensation is dealt with in the Workmen's Compensation Act 1923 which sets out payment rates dependent on damage done. Families of anyone killed whilst at work should be remunerated with 30,000 takas (around £300), and if serious injury occurs then the employee should be rewarded with 10,000 takas¹³ (around £100) – anecdotally the reality is

⁶ International Labour Organisation, 'Shipbreaking: A Hazardous Work', http://www.ilo.org/safework/info/WCMS_110335/lang--en/index.htm, February 2017.

⁷ Hossain, S., et al, 'Impact of Ship-breaking activities on the coastal environment of Bangladesh and a management system for its sustainability', (2015), *Journal of Environmental Science and Policy*

⁸ World Maritime News, 'Five dead at Gadani Shipbreaking Yard', <http://worldmaritimeneeds.com/archives/210018/five-dead-in-fire-at-gadani-shipbreaking-yard/>, January 2017

⁹ World Maritime News, 'Worker died at Bangladeshi Shipbreaking Yard', <http://worldmaritimeneeds.com/archives/208486/worker-dies-at-bangladeshi-shipbreaking-yard/>, January 2017

¹⁰ International Federation for Human Rights, 'Where do the floating dustbins end up? Labour rights in shipbreaking yards in South Asia: The cases of Chittagong (Bangladesh) and Alang (India)', (2002), p29

¹¹ Hossain, 'Impact of Ship-breaking activities'.

¹² International Federation for Human Rights, 'Where do the floating dustbins end up? p29.

¹³ Workmens Compensation Act 1923, (no. 8 of 1923).

of lesser payments relational to social status. In addition, further problems have been documented to include: lack of evidence of employment leading to issues with social care, continuing employment and remuneration for occupationally injured workers.

As a further example of malpractice within the yards, there are worryingly high rates of child labour in Bangladesh at 10.94%,¹⁴ the average lifespan of an Asian shipbreaking worker is 'alarmingly low'¹⁵ at 40 years old; and women are only employed in small numbers. The only positive from this is that women are, on average, paid substantially more than male employees and have a better likelihood of permanent employment. Wages are way below a 'minimum wage' that we would be acceptable in a western state. Bangladeshi wages are at around 70 takas a day (around 70p) and if a person does not work a day they will not be paid. In India the wages are paid monthly and the normal worker can earn around 673 rupees, the equivalent of £8.33, in violation of relevant Indian law.¹⁶

Organised crime within the yards has been identified as another danger faced by workers and anyone who attempts to investigate the yards. It has been reported that 'there is (in Bangladesh) no other legal economic activity in which businesses and crime are so interconnected'¹⁷ with accompanying bribes and threats. In 2001,¹⁸ a journalist from Ittefaq was tortured for 12 days after reporting on the dire conditions that the workers were dealing with in the shipbreaking yards. His punishment included having cigarettes stubbed out on his hands as well as being refused water or food, and having needles pushed under his finger nails on his writing hand. Circumstances are further aggravated by the lack of protection from any wrongdoing, with police officers known to have been paid off for as little as 50,000 takas¹⁹ (around £500).

Health is regarded as playing a lesser consideration to the desperation of the workers to put food on the table for their families; working conditions intolerable in European countries are overlooked as a result. Hossain and Islam have observed that 'the fatality rate of Alang's ship recycling work place is six times higher than the Indian mining industry'²⁰ identified as being a result of two factors: long term exposure to dangerous chemicals resulting in work place

¹⁴ International Federation for Human Rights, 'Where do the floating dustbins end up? p35.

¹⁵ NGO Shipbreaking Platform, 'About shipbreaking: problems and solutions', <http://www.shipbreakingplatform.org/main-aspects/problems-and-solutions/>, February 2017.

¹⁶ The Factories Act 1948, (No. 63 of 1948).

¹⁷ International Federation for Human Rights, 'Where do the floating dustbins end up? p20.

¹⁸ Ibid p4.

¹⁹ Ibid.

²⁰ Hossain, M., Islam, M., 'Shipbreaking activities and its impact on the coastal zone of Chittagong, Bangladesh: Toward sustainable management', (2006), *Young Power in Social Action*.

disease; and accidents that occur due to lack of health and safety. A survey conducted by the NGO Young Power in Social Action (YPSA) in 2005²¹ showed that 86.44% labourers received no medical facilities from yard owners. This hardly contributes to the country's SDG concerns – particularly for 'Good Health and Well Being' – the main objective of which is to ensure greater access to 'safe and effective medicine'.²² The report also found that 88% of workers had suffered from some sort of accidental injury, 56% suffering from skin diseases and 87% experiencing muscle pain. It is reasonable to assume this could be a consequence of over-exposure to toxins such as Persistent Organic Pollutants (POP's) and Asbestos; and undertaking work, such as carrying large pieces of steel on bare shoulders. It has been reported that 'asbestos concentrations ranged from 2mg-400mg in the shipbreaking yards in Chittagong, Bangladesh'.²³ This is a dangerously high level of exposure. Asbestos has a destructive effect on the human body: a cause of cancers (asbestosis and mesothelioma) which will result in disability and death in most cases. In addition, POP's, Polycyclic Aromatic Hydrocarbons (PAH's) and Tributyltin (TBTS), compounds regularly detected around the shipbreaking yards cause a variety of negative health effects including: malignant tumours and birth defects. Given these impacts, after the explosion of TT Dena the yard owners called the yard workers together with the promise of providing protective gear for them, however it was reported two years later that the promise had not been met.²⁴

It is the economic value that attracts more affluent ship owners to sell their ships to India and Bangladesh for recycling. It is cheaper, more efficient and removes responsibilities they may have with regard to recycling. It's arguable that the economic benefits are shared however: India and Bangladesh's shipbreaking industries have been booming since the 80's and may continue to grow given the lack of regulation. Hossain et al reported that 'Bangladesh dismantled 300 ships by the end of 2012, an increase of approximately 36% of ships dismantled since 2009',²⁵ representing a clear example of the increase in demand for ship recycling in developing countries. Although the industry poses health risks to workers and local communities, it is an unenviable, stark choice of health versus wealth in a subsistence economy. The drivers that lead less wealthy nations to accept dangerous jobs or hazardous materials can be seen worldwide, in 1988 the Government of Guinea Bassau accepted 15

²¹ Ibid.

²² UNDP in Bangladesh, Sustainable Development Goals, <http://www.bd.undp.org/content/bangladesh/en/home/sustainable-development-goals/goal-3-good-health-and-well-being.html>, April 2017.

²³ Hossain, 'Impact of Ship-breaking activities'.

²⁴ International Federation for Human Rights, 'Where do the floating dustbins end up? p27.

²⁵ Hossain, 'Impact of Ship-breaking activities'.

million tonnes of toxic waste for \$600 million.²⁶ The willingness to reduce the equation to pure economics is shocking. Lawrence M. Summers, the World Bank's Chief at the time said that, 'the economic logic behind dumping a load of toxic waste in the lowest wage country is impeccable and we should face up to that...'.²⁷ The approach of ship owners/recycling companies to shy away from responsibility is a frequent one seen in the industry – only recently the Basel Action Network (BAN) called on the governments of Mauritius, Namibia and India to act against a recycling company who had bought a ship, the 'Horizon Trader', and sent it to India to be beached instead of carrying out safe and approved recycling methods as it suggested it would.²⁸ The ship was likely to be carrying PCB's, and would pose a serious threat to the coast and workers in the yards. Unfortunately, the action taken by the BAN did not result in the ship being refloated and sent back to its flag state, their acts did however cause the original owners, Matson, Inc., to implement a new policy ensuring prohibition of any scrapping of their vessels on the beaches of India and Bangladesh. This represents a victory as the consequence of this being that 23 of their vessels will now be scrapped according to the Basel Convention.²⁹ BAN is not alone in calling upon ship-owners to take responsibility for where their ships are eventually scrapped. The NGO Shipbreaking Platform has recently demanded 'that European ship owners stop selling their end of life vessels to the beaching yards of Bangladesh' as 'it's not acceptable to turn a blind eye on the precarious situation or the sake of maximum profit – EU ship owners are fully aware of the dire conditions in Chittagong and more sustainable alternatives to the beaching method.'³⁰

It is debatable whether the negative effects of shipbreaking can be outweighed by the positives of the industry. The creation of jobs and trade that result from the yards is important. Hossain has estimated that there are in the region of 200,000 people working in the business allied to shipbreaking,³¹ and many of these employees are engaged in second hand trade sales and small grocery stores. The NGO Christian Service Society gives out more than 100 small loans a year to workers and their families in Sitakundu and with opportunities like this 'the yards have drawn entrepreneurs by the thousands.'³² This type of activity does not only generate non-dangerous jobs linked to the industry, but ensures that almost every part of the ship is

²⁶ Minister of Trade and Tourism, "We need more money" Africa: The industrial worlds dumping ground?' (1988), *African Business*, pp10-11.

²⁷ Puckett, J., 'The Basel Ban: A Triumph over business as usual', 1997.

http://archive.ban.org/about_basel_ban/jims_article.html#1, November 2016.

²⁸ Basel Action Network, 'Dead US Ship Ends on Indian Shipbreaking Beach',

<http://www.ban.org/news/2016/1/22/dead-us-ship-ends-on-indian-shipbreaking-beach>, March 2017

²⁹ Basel Convention on the Transboundary movements of Hazardous Waste and their disposal 1992, vol.167.

³⁰ World Maritime News, 'Fatal Accidents Rise at Bangladeshi Shipbreaking Yards', April 2017.

³¹ Hossain, 'Impact of Ship-breaking activities'.

³² International Federation for Human Rights, 'Where do the floating dustbins end up?'

recycled or re-used. It is because of this type of work, alongside the large scale recycling of ships, that the commerce is regarded as a 'beneficial economic and substantive endeavour where reuse of steel and oil benefits the environment'.³³ With the growth of the industry, both India and Bangladesh could be arguably viewed as partially meeting the '*Decent work and Economic growth*' goal, which stated that 'encouraging entrepreneurship and creation of jobs'³⁴ would be key to pursuing the goal. It is clear that the shipbreaking industry is an integral part of economic life: one shop owner commented: 'if the yards close we die...all of our business comes from the yards. Without them our small businesses would not exist.'³⁵ Yet the effect on other industries, such as fishing, has been overwhelmingly destructive making it almost redundant in the seas neighbouring the yards. The space taken up by the yards and the pollution that comes with them has resulted in fishers having to relocate in order to work: every positive to the industry seemingly balanced by a negative.

As with the health versus wealth concept, there is a struggle between opportunity and challenge in the industry. Although shipbreaking poses risks to anyone involved, the economic and social opportunities for the countries are seen to outweigh such challenges. In Bangladesh the shipbreaking industry is a 'vital source of income for the country and a livelihood for a significant portion of its population'.³⁶ The yards provide 90% of the 8 million tonnes of building material that the country needs every year,³⁷ as well as around 60% of the country's yearly demand for steel³⁸ – way more than the country could afford to buy. As the need to import steel from outside of the country decreases so does the money spent by the Government – the industry in turn allows Bangladesh to have access to materials that are otherwise not commercially available to it. Other materials such as glass wool would typically be imported from Denmark costing more than 400 takas a kilo, compared to the recycled materials at only 20 takas a kilo.³⁹ The Bangladeshi Government also profit by imposing taxes on the yards, earning them substantial revenues from shipbreaking each year through import duties (7.5%) and yards tax (2.5%)'.⁴⁰

³³ Moncayo, G., 'International Law on ship recycling and its interface with EU', (2016), *Marine Pollution Bulletin* 109.

³⁴ UNDP in Bangladesh, Sustainable Development Goals, <http://www.bd.undp.org/content/bangladesh/en/home/sustainable-development-goals/goal-3-good-health-and-well-being.html>, April 2017.

³⁵ International Federation for Human Rights, 'Where do the floating dustbins end up? p23.

³⁶ Alam, S., Farque, A., 'Legal Regulation of shipbreaking industry in Bangladesh: The International regulatory framework and domestic implementation challenges', *Marine Policy* 47, 2014, p53.

³⁷ Hossain, Islam, 'Shipbreaking activities and its impact on the coastal zone of Chittagong'.

³⁸ Hossain, 'Impact of Ship-breaking activities'.

³⁹ International Federation for Human Rights, 'Where do the floating dustbins end up?'

⁴⁰ Hossain, Islam, 'Shipbreaking activities and its impact on the coastal zone of Chittagong.

The industries in both Bangladesh and India have dramatically expanded in the last few years 'at the cost of environmental degradation and severe labour exploitation.'⁴¹ The 'primitive cleaning methods'⁴² practised before the ships are beached, and the fact that the yards are using the method of beaching ships, are major contributors to the poor state of the environment in both countries. The European Commission has reported '40,000-1.3 million tonnes of toxics on board of end of life vessels are exported each year to South Asia from the EU alone'.⁴³ Abdullah et al note that 'in Sitakundu ships are dismantled on the shore, where 90% of the vessels body lies in the intertidal zone...making it impossible to prevent oil pollution and other liquid contamination'.⁴⁴ The beaching method also contributes to coastal erosion, as 'the soil loses its binding properties'⁴⁵ when it becomes contaminated with rust and other materials, as well as 'miles of protected mangrove trees, essential to ecosystem health and protection from monsoons being cut to make way for ships.'⁴⁶ The effect of coastal erosion as well as the depletion of mangrove forests means that the inhabitants of these areas are more vulnerable to natural disasters such as cyclones, storm surges and floods.

It has been noted by Hossain that 'due to virtually unregulated shipbreaking activities and the resulting pollution, the formerly pristine intertidal and biologically diverse areas of Sitakundu, Chittagong, are now highly degraded'.⁴⁷ The story is similar in India: the central pollution board in Alang, has stated that the area produces a total of 2,428 metric tonnes of hazardous waste a year⁴⁸, all factors that contribute to the bad reputation that shipbreaking has with regards to the environment. It is therefore unsurprising that all ship recycling activities are posing an 'enormous threat not only to the immediate workforce, but also the marine environment that surrounds the dismantling yards'.⁴⁹ Biodiversity is seemingly very poor in areas adjacent to the shipbreaking yards – the toxin TBT which can be found in paints on ships, has been discovered to be significantly toxic to aquatic ecosystems and 'the steel for a single ship can be coated by between 10-100 tonnes of paint'.⁵⁰ The impacts of pollution from TBT are related

⁴¹ Alam, Farque, 'Legal Regulation of shipbreaking industry in Bangladesh', p53.

⁴² Hossain, 'Impact of Ship-breaking activities'.

⁴³ NGO Shipbreaking Platform, 'About shipbreaking: problems and solutions', <http://www.shipbreakingplatform.org/main-aspects/problems-and-solutions/>, February 2017.

⁴⁴ H, Abdullah., M, Mahboob., D, Seker., 'Monitoring the drastic growth of shipbreaking yards in Sitakundu : A threat to the coastal environment of Bangladesh', (2012), *Environmental Monitoring Assessment*.

⁴⁵ Hossain, Islam, 'Shipbreaking activities and its impact on the coastal zone of Chittagong', p27.

⁴⁶ NGO Shipbreaking Platform, 'About shipbreaking: problems and solutions'.

⁴⁷ Hossain, 'Impact of Ship-breaking activities'.

⁴⁸ International Federation for Human Rights, 'Where do the floating dustbins end up? p65.

⁴⁹ OECD Council, 'Environmental Climate Change Issues in the shipbuilding industry', <https://www.oecd.org/sti/ind/46370308.pdf>, November 2016.

⁵⁰ Ibid.

to defects in shellfish, and the generation of male characteristics in female marine snails,⁵¹ even at low levels of exposure. These negative effects on marine life have led to the use of anti-fouling paints being prohibited/restricted by the International Convention on the Control of Harmful Anti-fouling Systems on Ships.⁵² Further studies⁵³ have shown a very poor distribution of phytoplankton and other fish species in the areas surrounding shipbreaking yards: species, such as the rare and valuable Halisha salmon have disappeared from Chittagong's fisheries; a species that once provided fishers with a regular and marketable catch.

Oil from ships also have damaging effects on marine life; seabirds become oiled and often die due to drowning or poisoning, while others suffer organ damage and fertility impacts. Fish are known to suffer haemorrhaging and although many fish can purify themselves this is only when there are low levels of pollution present. With oil sludge, coming from shipbreaking activities alone, estimated to be between '400000 and 1.3 million tonnes annually'⁵⁴ the problem is significant and the impacts upon biodiversity caused by this compound and many others that pollute the area will, undoubtedly, impact upon the sustainability of human settlements within shipbreaking areas.

There is no doubt that shipbreaking is a useful activity, doubts remain, however, as to the extent that it is being regulated in a way beneficial to all parties involved as well as minimizing environmental impacts. As an activity that employs more than 10000 people, shipbreaking is a perilous and dirty industry that apparently shies away from any public attention, keeping its secrets hidden.⁵⁵ The hazardous nature of the work has significantly reduced the quality of the coastline in both India and Bangladesh and has produced significant effects on marine life. Yet the consensus amongst workers and the attitude of the Government is that the industry helps them thrive and survive, providing opportunity that would not otherwise be available to them; the health versus wealth argument taking precedence here. The main problem is encapsulated in the view that 'if we try to improve the situation in the yards, and especially working conditions, the result will certainly be unemployment'⁵⁶, something that would be extremely detrimental to local economies. The niceties of contemporary human rights claims are simply not a priority set against the need to clothe, feed and provide shelter for workers'

⁵¹ Hossain, Islam, 'Shipbreaking activities and its impact on the coastal zone of Chittagong', p31.

⁵² International Convention on the Control of Harmful Anti-fouling Systems on Ships 2001, Treaty Series no.13 (2012), in force 2008.

⁵³ Hossain, Islam, 'Shipbreaking activities and its impact on the coastal zone of Chittagong'.

⁵⁴ OECD Council, 'Environmental Climate Change Issues in the shipbuilding industry'.

⁵⁵ Hossain, Islam, 'Shipbreaking activities and its impact on the coastal zone of Chittagong'.

⁵⁶ International Federation for Human Rights, 'Where do the floating dustbins end up? p65.

families. Workers in the yards in India and Bangladesh have little choice but to accept a reality which essentially ignores international agreements, and many others that are in place as an attempt to protect their interests.

2 International, European and Domestic Law

There is an array of laws, both international and local governing shipbreaking; these are evidenced in Conventions, formal regulatory provisions, guidelines and court rulings and are considered in this section. The early implementation of the 1980s Convention on the Transboundary Movement of Hazardous Waste and their Disposal⁵⁷ (the Basel Convention) was the first international regulation regarding the movement of such wastes. From there the law has further developed both internationally and regionally creating a web of interlocking controls that should oversee the recycling of sea going vessels.

Basel Convention on the Transboundary Movement of Hazardous Waste and their Disposal

The Basel Convention, was adopted in March 1989 to regulate the transboundary movement of hazardous wastes for disposal, with particular focus being on the dumping of such wastes in LDC's. It was a response to the outcry and growing public recognition of environmental issues after the ships *Katrin B* and *Pelicano*⁵⁸ made headlines for their questionable plans for waste disposal. As of 2017 there are 185⁵⁹ parties to the Convention which 'aims to protect human health and the environment against the adverse effects resulting from the generation, management, transboundary movements and disposal of hazardous wastes and other materials.'⁶⁰ Unfortunately there are still exceptions in terms of a certain number of states who have not ratified the Convention, including the USA.

Wastes are defined in Article 1 to include 'substances or objects which will be disposed of or are required to be disposed of under provisions of national law'. The definition includes all materials listed in Annex I as hazardous wastes, with Annex III providing a list of characteristics that should be met in order for the materials to be covered by the Convention. Annex I includes materials like biomedical and healthcare wastes, used oils, PCBs and POPs, it does not explicitly cover wastes derived from ships but does account for materials that are

⁵⁷ Basel Convention on the Transboundary movements of Hazardous Waste and their disposal 1992, vol.1673.

⁵⁸ Greenhouse, S., 'Toxic Waste Boomerang: Caio Italy', *NY TIMES*, 1988.

⁵⁹ The Basel Convention, 'Parties to the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal', <http://www.basel.int/Countries/StatusofRatifications/PartiesSignatories/tabid/4499/Default.aspx?ui>, February 2017

⁶⁰ Beyerlin, U., and Marauhn, T., *International Environmental Law*, (2011), p216.

routinely present such as asbestos (Y36). The annexes do not however cover radioactive wastes. Article 2(8) requires the environmentally sound recycling of this waste with management being applied in 'a manner that will protect human health and the environment against adverse effects which may result from such wastes'. When attempting to meet the Convention's aims with regard to Article 2(8), the Proximity Principle has utility.⁶¹ This calls for the treatment of waste to be as close to its place of origin as possible, from storage, to reuse and final disposal.

The initial draft of the Convention did not restrict movements or disposals of wastes from any country apart from those South of 60° latitude if there was *Prior Informed Consent*.⁶² This process requires the supply of information 'which is sufficient to enable the nature and effects on health and the environment of the proposed movement to be assessed'.⁶³ Such information requires the importing state to reject or accept the waste from entering their territory for disposal. Concern over these provisions soon became apparent, particularly in non-OECD countries where facilities may not have existed, leading to the adoption of regional bans on the import of hazardous waste such as the Bamako Convention in 1998,⁶⁴ and eventually the recognition of the issue within the Basel Convention framework known as the Basel Ban Amendment.

The Basel Ban⁶⁵ was intended to prevent the movement of hazardous waste from OECD countries to non-OECD countries, minimizing the amount of dumping in LDC's that had been occurring under the Conventions own terms. Strongly opposed by the OECD countries they suggested implementation on a partial basis, however representatives from the LDC's argued that this would be neither a justifiable nor a fair response to the situation. At the First Convention of the Parties in 1992, Mr A Bhattachariya spoke on behalf of the Indian Delegation and commented on need for a ban arguing, 'You industrialised countries have been asking us to do many things for the global good – to stop cutting down our rainforests, to stop using your CFC's – now were asking you to do something for the global good – to keep your own waste'.⁶⁶ The Ban Amendment is yet to come into force completely as it has only been ratified by 88

⁶¹ Case C-2/90 *Commission v Belgium (Walloonian Waste)* ECR [1992] 'Waste' is considered to be 'goods' and so the proximity principle does apply to waste products.

⁶² (Article 4(z)(f), 6(1) and Annex V) Basel Convention.

⁶³ Birnie, P., et al., *International Law and Environment*, 3rd Ed., (2009), p478.

⁶⁴ Bamako Convention on the ban of the Import into Africa and the control of transboundary movement of Hazardous Waste within Africa 1998.

⁶⁵ Decision III/1 The Ban Amendment [1995].

⁶⁶ Puckett, J., 'The Basel Ban: A Triumph over business as usual', 1997, http://archive.ban.org/about_basel_ban/jims_article.html#1, November 2016.

countries, however there are some implementation measures via the EU's Regulation 1013/2006⁶⁷ and the UK's Transfrontier Shipment of Waste Regulation 2007.⁶⁸

Hong Kong Convention 2009

More recently the International Maritime Organisation, IMO and parties to the Basel Convention created a new treaty, known as the Hong Kong Convention 2009.⁶⁹ Adopted in May 2009, the Convention is yet to come into force. It has a ratification requirement of countries representing 40% of the world's fleet and a significant portion of the world's recycling facilities (Article 17(1)(2)). It has been noted that the Convention 'transitioned from the realm of transboundary movement of wastes to a specialist regime'⁷⁰ and 'intends to address all the issues around ship recycling including the fact that ships sold for scrapping may contain environmentally hazardous substances'.⁷¹ Article 3 of the Convention establishes the vessels to which it will apply, it should be noted that the Convention does not provide guidance for military vessels.⁷² It does however require ships to be recycled in an environmentally sound and safe way 'as far as it is reasonable and practical'. It defines waste, etc. in a way consistent with other international meanings;⁷³ and recognises the authority of the Basel Convention and other treaties such as UNCLOS.⁷⁴ A further alignment is via requirements to clean ships of hazardous waste before docking. As noted below, this was outlined by India's Supreme Court as a key factor in allowing ships into their recycling facilities.

The main principles of the Convention itself include regulations regarding the construction, design and preparation of ships to help facilitate any recycling processes in the future – this is commonly known as the 'cradle to grave' approach (Annex I, Chapter 2).⁷⁵ The paperwork to be required under the Convention seems to be more comprehensive compared to the Basel Convention, something that could encourage implementation of its aims. Ship recycling yards will need to be authorised under the new Convention,⁷⁶ something already practised in Europe

⁶⁷ Regulation 1013/2006 Shipments of Waste [2006] OJ L190/1.

⁶⁸ No 1711 Transfrontier Shipment of Waste Regulations SI 1711/2007.

⁶⁹ Hong Kong Convention 2009.

⁷⁰ Moncayo, G., 'International Law on ship recycling and its interface with EU', (2016), *Marine Pollution Bulletin* 109, p1.

⁷¹ International Maritime Organisation, 'Recycling of Ships', www.imo.org/en/ourwork/environment/shiprecycling/pages/default.aspx, November 2016.

⁷² Hong Kong Convention 2009, Article 3(2).

⁷³ *Ibid*, Article 2.

⁷⁴ The UN Convention on the Law of the Sea, (Article 15, Annex I Reg.3).

⁷⁵ The Hong Kong convention provides for other practices such as; Annex I, Regulations 8-11 regulate all of the certification needed on ships and in ship recycling yards, from authorisation of ship breaking facilities (Reg.8, s1(1)), Ship recycling plans (Reg.9), International Ready for Recycling Certificates and International Certificates on Inventory of Hazardous Materials.

⁷⁶ Hong Kong Convention 2009, Reg.8 (1)(1).

via Regulation 1257/2013. Companies such as Class NK⁷⁷ have already begun enabling this process via a consultation scheme that aims to help 'ease' ship owners into implementing the Convention. They also issue authorization certificates for ship breaking yards they have worked with, mainly in China but have also approved four plans in India as of December 2015.

Prevention of effects to human health and the environment are also considered in the Convention. Training of workers and their own safety is covered by regulation 22 which states that workers should not be dealing with hazardous waste without adequate knowledge and safety equipment. All accidents should be reported in order to avoid them being repeated in the future⁷⁸ and a list of suitable protective equipment is provided for any employer who may need clarification. Requirements on all actors are clarified through the Hong Kong Convention: from the initial design and construction of the ship, to the safety of the workers scrapping it. 'It will address concerns about working and environmental conditions in many of the worlds ship recycling facilities'⁷⁹ and ensure that all participants are doing as much as they can to negate the issues linked to the industry.

EU Law – Regulations 1013/2006 & 1257/2013

The EU incorporated the Basel Convention into its laws via Regulation 259/93 on Supervision and control of Transboundary Movement within the European Community of shipments of waste within, into and out of the European Community in 1993,⁸⁰ amended in 2007.⁸¹ The current Regulation is concerned with shipments of waste between EU, OECD countries and signatories to the Basel Convention and covers all wastes within the Annexes of the Basel Convention except for radioactive wastes, wastes generated on board of ships, animal by-products, certain shipments from the Antarctic and waste produced by the armed forces. Similar to the Basel Convention 'Regulation 1013/2006 is silent on hazardous materials built into the structure of vessels, such as asbestos; and those that are not classified as either cargo or wastes derived from operations';⁸² this can be seen by the outcome of the EU case *Sandrien*⁸³ where the vessel's structure contained dangerously high levels of asbestos but the shipment was not covered by 1013/2006.

⁷⁷ ClassNK, 'Ship Recycling Convention (the Hong Kong Convention 2015), 2015, [www.classnk.or.jp/hp/en/activities/statutory/shiprecyle/](http://www.classnk.or.jp/hp/en/activities/statutory/shiprecycle/), November 2016.

⁷⁸ Reg.23.

⁷⁹ International Maritime Organisation, 'Recycling of Ships'.

⁸⁰ Regulation 259/93 Supervision and control of Transboundary Movement within the European Community of shipments of waste within, into and out of the European Community, [1993].

⁸¹ Regulation 1013/2006 on Shipments of Waste.

⁸² Moncayo, G., 'International Law on ship recycling and its interface with EU', (2016), *Marine Pollution Bulletin* 109, p6.

⁸³ Case No. 200105168/2, *The Hague Council of State*.

Reflecting the obligations contained within the Basel Convention the main provisions of the regulation include Prior Written Notification/Consent⁸⁴ for shipments of wastes listed in Annex IV ('Amber waste') and shipments for disposal of Annex III waste ('Green waste'); the requirement of environmentally sound recycling;⁸⁵ and the duty 'for the person whose action is the cause of an illegal shipment to take back waste involved or make alternative arrangements for its recovery or disposal'.⁸⁶ The levels of control will vary dependent on the category of waste and what is intended to happen to this waste, contrary to the Basel Convention which does not compartmentalise wastes but simply has a 'one rule for all' approach. Green wastes are those that are deemed not to be hazardous and are generally subject to lesser controls than those in the Amber waste category. As seen in the *Omni Waste*⁸⁷ case, which concerned a dispute as to whether a combination of two listed materials were a 'green waste', this is not an immediate assumption as 'mixed waste' i.e. a combination of two green listed wastes may still be subject to higher levels of control due to their potentially dangerous state when merged. In relation to the recycling of ships this is an important outcome as it means that disposal of vessels will be subject to high levels of control within the EU's regulation, creating a stricter and potentially safer system.

The EU introduced Regulation 1257/2013⁸⁸ in order to implement the Hong Kong Convention 2009, as well as issuing additional safety and environmental regulations. It establishes guidelines for adequacy in ship recycling yards and allows ships flying state flags within the EU to be recycled in yards that are on the European List.⁸⁹ Both 3rd countries and EU member states may be on the list, with application routes varying dependant on where the site is based. Alongside applications, a range of certificates and documents will be required (i.e. Ship Recycling Plans, etc.) as evidence that the yard meets the standards expected. A welcome new development is the requirement of recycling only from 'built structures'(A13), effectively banning the use of the beaching method. Whether this article will be enforced to the standard needed to tackle the problem is doubtful: the practice of beaching is popular and widespread meaning that it will take a big commitment from ship-owners and ship breaking yards to

⁸⁴ Regulation 1013/2006 Shipments of Waste [2006] OJ L190/1, Article 4.

⁸⁵ Article 2.8.

⁸⁶ Preamble 25.

⁸⁷ Case C 259/05 *Omni Waste Case* ECJ [2007] I-04945.

⁸⁸ Regulation 1257/2013 Ship Recycling and amendment of No. 1013/2006 and Directive 2009/16/EC [2013] OJ L330/1.

⁸⁹ European Commission, EC.Europa.EU/Environment/waste/ships/list.HTM, November 2016.

acknowledge this part of the regulation in order for it to be successful.⁹⁰ The Hong Kong Convention is potentially less effective as it does not contain the requirement.

United Kingdom – Transfrontier Shipment of Waste Regulation 2007

The UK's current governing law is the Transfrontier Shipment of Waste Regulation 2007; it creates offences for disposal in a third country contrary to Article 34,⁹¹ as well as integrating EU regulation 1013/2006 and the Basel Convention into the UK's legal system. It follows a similar approach to the EU Regulation by separating Green listed wastes under Article 18 from other wastes and creating differing degrees of control dependent on the dangers posed by certain types of waste disposal. The UK's Regulation acknowledges the importance of taking responsibility for the way ship-owners dispose of their vessels creating a legal duty to 'make sure your waste is handled safely and only passed to people who are authorised to receive it'.⁹² The UK also has a specialised ship recycling strategy⁹³ which sits beside the 2007 Regulation setting out general obligations of ship owners to recycle in an environmentally sound manner, implementing the Basel Ban (Article 14) and reflecting the EU's standards for ship recycling facilities (Annex I).⁹⁴

Indian and Bangladeshi laws

The most active countries in the shipbreaking industry present a different regulatory story. India's legislation does not deal directly with shipbreaking and instead enforces control via legislation including the Environmental Protection Act 1986,⁹⁵ the Factories Act 1948⁹⁶ and the Water Act 1974.⁹⁷ In an attempt to control the shipbreaking yards directly the Gujarat Maritime Board has established rules, such as the 2003 Ship Recycling Rules⁹⁸ and the Ship Recycling Regulations 2015; these are however only guidance, and are not directly enforceable.

The Supreme Court of India is active in driving the current legal approach to shipbreaking yards. The judgment in *Research foundation for Science Technology National Resource*

⁹⁰ Although the application to EU flagged vessels may provide a benefit.

⁹¹ SI(2007/1711) Regulation 21

⁹² GOV.UK, 'Waste: Import and Export', April 2016 <https://www.gov.uk/guidance/importing-and-exporting-waste>, December 2016.

⁹³ DEFRA, 'UK Ship Recycling Strategy', 2007, http://www.shipbreakingplatform.org/shipbrea_wp2011/wp-content/uploads/2011/12/2007-UK-ship-recycling-strategy.pdf, November 2016.

⁹⁴ It is though, limited to Government vessels.

⁹⁵ Environmental (Protection) Act 1986, No. 29 of 1986.

⁹⁶ The Factories Act 1948, No. 63 of 1948.

⁹⁷ The Water (Prevention and Control of Pollution) Act 1974.

⁹⁸ Ship Recycling Rules 2003.

Policy v Union of India and Anr,⁹⁹ established recommendations¹⁰⁰ for control which the court accepted to be strict practice guidelines until the Government took forward legislation suggested as immediately necessary. Recommendations included: use of efficient technology; immediate bans on beach burning; penalties for yards operating without licenses.¹⁰¹ Another leading case was the Supreme Court's ruling in *Research Foundation for Science Technology and Natural Resource Policy vs Union of India and Ors*.¹⁰² It prohibited end of life ships docking in any of India's yards from OECD countries without having been pre-cleaned of hazardous materials. The Court also stated that in, 'cases of a similar nature, the concerned authorities shall comply with the norms laid down in the Basel Convention or any other subsequent provisions that may be adopted by the central Government in aid of clean and pollution free maritime environment'.¹⁰³ The court's appreciation of the protection of both the environment and human health, prompted suggestions of better Government regulation.

Similarly, in Bangladesh the 'shipbreaking industry is regulated in a fragmented manner, by a disparate array of Govt. departments...'¹⁰⁴ Laws on the environment and workplace such as the Labour Act 2006,¹⁰⁵ Environmental Conservation Act 1995¹⁰⁶ and the Environmental Law Act 1995¹⁰⁷ all legislate for shipbreaking elements, but on general terms. As with the development of law in India, the judicial rulings aim to impact upon the industry regulation. The Bangladesh Environmental Lawyers Association (BELA) has taken cases to courts: with successful outcomes - such as the prohibition of the dumping of the ship *MT Enterprise* in Chittagong in 2008,¹⁰⁸ and the court judgment in *Bela v Bangladesh* (2006)¹⁰⁹, which stated any ships on Greenpeace's list of most dangerous vessels¹¹⁰ should not be imported into Bangladesh for recycling. Nevertheless the efforts of the courts have at times been

⁹⁹ *Research foundation for Science Technology National Resource Policy v Union of India and Anr.* (2005(10)SCC 5/10).

¹⁰⁰ Annex 1.

¹⁰¹ At paras 4-9 of the judgment.

¹⁰² Case no. 257 of 1995, *Research Fnd for Science Technology and Natural Research Policy v Union of India and Ors*. [2012]

¹⁰³ Case no. 257 of 1995

¹⁰⁴ Alam, Farque, 'Legal Regulation of shipbreaking industry in Bangladesh', p53.

¹⁰⁵ Bangladesh Labour Act 2006.

¹⁰⁶ Bangladesh Environmental Conservation Act 1995, No. 1 of 1995.

¹⁰⁷ Environmental Law Act 1995.

¹⁰⁸ NGO Shipbreaking Platform, 'South East Asian Laws and Guidelines', 2011, <http://www.shipbreakingplatform.org/south-asian-laws-and-guideline/>, December 2016

¹⁰⁹ Alam, Farque, 'Legal Regulation of shipbreaking industry in Bangladesh' p48.

¹¹⁰ Greenpeace, 'Vessels in the Greenpeace blacklist', <http://www.greenpeace.org/international/en/campaigns/oceans/pirate-fishing/Blacklist1/Browse-vessels/>, December 2016.

unsuccessful, an order to shut down all of the yards in Chittagong in 2008¹¹¹ has not and will not be enforced as envisioned questioning their actual authority.

The Shipbreaking Rules 2011,¹¹² developed by the Bangladeshi Ministry of Industry impose guidance and control on the shipbreaking yards along Bangladesh's coastline. Methods of recycling are prescribed with detailed description of beaching and anchoring methods. Specifications for certificates and audits are established, such as 'gas free for man entry' and 'gas free for hot work' certificates. They also reflect worker safety, stating 'no person shall allow to be employed in ship breaking yards without appropriate training certificate'¹¹³ ; and acknowledge the need for correct use of safety equipment when working on a vessel. International law is also reflected in the rules: an important addition creating consistency between the regional and international perspectives. However, with a large and established industry, implementation of these rules has suffered 'due to the lack of political will'¹¹⁴ and the Government almost turning a blind eye to an industry that has significant value to the country. The need for consistency within the industry is clear, as is action to implement internationally agreed standards such as the Hong Kong Convention. It is up to the national governments to enforce the laws for both local and global interests.

3 Assessment of the law in relation to the issues

Following cases like *Research Foundation for Science and Technology v Union of India*,¹¹⁵ the ship-recycling industry has suffered reverses; but 'shipbreaking nations have very little incentive to unilaterally introduce regulatory measures and safeguards to mitigate the environmental perils of shipbreaking'¹¹⁶ as a result of such rulings. The most recent International measure, The Hong Kong Convention, is still not in force. The Basel Convention, the leading measure to date has also been subject to critique along with domestic rules of the leading shipbreaking countries.

The Basel Convention 1989 was, however, adopted representing 'the maximum degree of consensus that was politically possible at the time'¹¹⁷ yet within several years was under review to introduce the Ban Amendment in order to address hazardous waste dumping within

¹¹¹ NGO Shipbreaking Platform, 'South East Asian Laws and Guidelines'.

¹¹² Shipbreaking Rules 2011.

¹¹³ Ibid, s.17(1)

¹¹⁴ Alam, Farque, 'Legal Regulation of shipbreaking industry in Bangladesh', p54.

¹¹⁵ *Research foundation for Science Technology National Resource Policy v Union of India and Anr. (2005(10)SCC 5/10)*.

¹¹⁶ Battacharjee, S., 'From Basel to Hong Kong: International Environmental Regulation of Ship-Recycling Takes One Step Forward and Two Steps Back', *Trade, Law and Development*, (2009), p203.

¹¹⁷ Kummer, K., *International Management of Hazardous Wastes*, (1995), p79.

LDC's. It was hoped that the Basel Convention would 'provide the first stage of a more stringent and detailed regime',¹¹⁸ yet on closer inspection it is uncertain whether the Convention can apply directly to shipbreaking. It is accepted that the Basel Convention poses difficulties when shipbreaking: the definition of 'waste' concerns 'substances or objects which are disposed of or are intended to be disposed of or are required to be disposed of by the provisions of national law'. Since the Convention has been in force the topic has been the focus of discussion. At the seventh meeting of the COP in 2004 it was determined that 'a ship may become waste, in accordance with Article 2 of the Basel Convention, and at the same time may be defined as a ship under international rules',¹¹⁹ a possible effort to deter ship-owners from attempting to avoid the rules by hiding the fact that their vessels are on their final voyage or waiting until they are within the jurisdiction of the recycling state to reveal their intention to dispose of the ship. This was confirmed by *Decision VII/26*¹²⁰ which determined that a ship becomes 'waste' when it is (a)disposed of, (b)intended to be disposed of, or, (c)required to be disposed of by national law. In addition rulings such as the decision in *Research Foundation for Science Technology and National Resource Policy v Union of India and Anr*¹²¹ have explicitly determined certain ships as being 'waste' under the Convention and the loophole has been further reduced by the introduction of the Basel BAN which explicitly prohibits the movement of any hazardous waste from OECD countries to developing countries.

The BAN itself has come under scrutiny for its ancillary effect resulting in a 'greater circumstance of greater primary resource and a larger pool of waste, contrary to its stated objective'.¹²² The prohibition of movement of hazardous waste and in turn large vessels for recycling to the non-OECD countries means that benefits of recycled material such as steel, and other recyclable materials mentioned in chapter one, would no longer exist. In turn government spending would increase resulting in less spending targeting the important SDG's. Arguably, the Convention almost looks past what is best for the LDC's and instead legislates for those in a 'developed market', eventually forcing the industry underground offering far less protection for labourers.¹²³

¹¹⁸ Ibid, p80.

¹¹⁹ Article 2 Basel Convention on the Transboundary movements of Hazardous Waste and their disposal 1992, vol.1673.

¹²⁰ *Decision VII/26 on Environmentally Sound Management of Ship Dismantling, U.N. Doc. UNEP/CHW.7/33 (October 2004).*

¹²¹ *Research foundation for Science Technology National Resource Policy v Union of India and Anr. (2005(10)SCC 5/10).*

¹²² Srinivasan, P., 'The Basel Convention of 1989 – A developing countries perspective', (2001), p10.

¹²³ Ibid, p12/13.

The Basel Convention may also be criticised in its lacking definition of 'environmentally sound recycling'¹²⁴ – it provides nothing more than the need to ensure that the recycling takes 'all practicable steps to ensure that hazardous wastes or other wastes are managed in a manner which will protect human health and the environment against adverse effects that may have come from such wastes'.¹²⁵ The guideline is sparse in technical detail and cannot prohibit the dangerous and dirty beaching method standard in many yards in India and Bangladesh. Perhaps the lack of direct application to the shipbreaking industry is a result of the original premise for the Convention, however the apparent ignorance of the issue means that the practice of beaching continues to be one of the largest contributing factors to the depletion of the environment and the loss of life in and around shipbreaking yards. Two decades later, the Hong Kong Convention took over five years to negotiate and has still not received the required number of signatures in order for it to come in force. The reason for this possibly being that the conditions for the Convention to come into force require it to be ratified by countries which represent 40% of the world's gross tonnage, observed to be an 'unusually high'¹²⁶ number. It is the first international convention to deal directly with the shipbreaking industry, and has been recognised by many states as providing a fair balance between the responsibilities of all parties involved in the ship recycling process.¹²⁷ Bangladeshi opinion notes that 'we now have something which we needed so much for so long to have smoother sailing of ship recycling',¹²⁸ although the critics of the Hong Kong Convention are also numerous. Rizwana Hasan a representative from BELA called the Convention a 'useless piece of paper'¹²⁹ and Friends of the Earth International considers the global response to have been 'a profound disappointment'.¹³⁰

The Convention does attempt to cover all aspects of a ships life, the well-known 'cradle to grave' approach, which is a considerable improvement on the work of the Basel Convention.¹³¹ The approach has been appraised as being 'more forward looking'¹³² in that it has the potential to eliminate the majority of hazardous waste from ships relatively soon. Additionally, changing the way ships are built aims to reduce or restrict the use of hazardous materials within ships' infrastructure, something observed to be 'clearly necessary to ensure that end of life ships will

¹²⁴ Alam, Farque, 'Legal Regulation of shipbreaking industry in Bangladesh', p51.

¹²⁵ Article 2(8) Basel Convention on the Transboundary movements of Hazardous Waste and their disposal 1992, vol.1673.

¹²⁶ Lloyd Register, 'Ship recycling – Practice and Regulation today' http://www.lr.org/en/_images/229-77058_ShipRecycling_040711_tcm155-223320.pdf, February 2017.

¹²⁷ Battacharjee, 'From Basel to Hong Kong', p.195.

¹²⁸ Puthucherril, T., *From Shipbreaking to Sustainable Ship Recycling*, (2010), p167.

¹²⁹ Battacharjee, 'From Basel to Hong Kong'.

¹³⁰ Puthucherril, *From Shipbreaking to Sustainable Ship Recycling*, p168.

¹³¹ Alam, Farque, 'Legal Regulation of shipbreaking industry in Bangladesh' p50.

¹³² Battacharjee, 'From Basel to Hong Kong', p221.

no longer be the source of contamination and occupational disease'.¹³³ This part of the Convention, when in force, alongside law such as the International Convention on the Control of Harmful Anti-Fouling Systems on Ships¹³⁴, should solve many of the industry's problems. Additionally the requirement for approved ship recycling facilities permitting recycling only between Convention parties is a positive. Commentators have observed that confirmation will be difficult,¹³⁵ however, the EU has taken steps to ensure that there are incentives for becoming an approved yard and for ship-owners using them. A stated aim of Regulation 1257/2013 is to make 'providing safe and clean solutions...a competitive advantage':¹³⁶ in turn creating a circular economy.

One notable omission from the Convention however is a prohibition of the beaching method: something that many would expect to be a pre-requisite to gaining affirmation of being an approved facility under the Convention. This issue addressed in the EU's ship Recycling Regulation¹³⁷ which prohibits the beaching method by requiring that recycling happens on 'built structures'. As the beaching method is perhaps the most damaging process, the inability of the Convention to regulate it suggests a failing. It is though important to understand that the likelihood of large shipbreaking states signing the Convention would be significantly lowered if this was a requirement: instead it may be better to look toward a way in which beaching can be reformed to ensure it is more environmentally sound. Although this represents a limitation of the Convention, shipping companies, including Wilh. Wilhemsen's and Rena Omori,¹³⁸ have stated that they would not use ship recycling yards that operated these methods and would instead seek dry dock recycling. It can be hoped the attitudes of large shipping companies will encourage better future practices. The 2009 Convention, does not adequately reflect key environmental principles, such as that the polluter should pay. By failing to insist upon a pre-cleaning procedure there is a lesser burden on the polluter/ship-owner, drawing the criticism that the ship recycling Convention is 'an obsolete relic that ignores long standing environmental and social principles.'¹³⁹ As with Basel, the Convention does not apply to

¹³³ Ibid. p.221.

¹³⁴ The International Convention on the Control of Harmful Anti-Fouling Systems on Ships, 2001

¹³⁵ Shipbreaking Platform, 'Make the Polluter pay – Why we need the EU ship recycling licence' http://www.shipbreakingplatform.org/shipbrea_wp2011/wp-content/uploads/2016/10/Position-Paper-FINANCIAL-INCENTIVE-Final-Version.pdf, March 2017

¹³⁶ Ibid.

¹³⁷ Article 13 Regulation 1257/2013 Ship Recycling and amendment of No. 1013/2006 and Directive 2009/16/EC [2013] OJ L330/1.

¹³⁸ Aase, O., Dissertation 'Implications of the Hong Kong Convention: From the Perspective of Shipping Companies'

<https://pearl.plymouth.ac.uk/bitstream/handle/10026.2/1493/MasterThesisOleAase10309936IntShippi ng.pdf?sequence=2&isAllowed=y>, March 2017.

¹³⁹ Puthucherril, *From Shipbreaking to Sustainable Ship Recycling*, p168.

naval/auxiliary vessels, although it does require that these ships should still be subject to environmentally sound ship recycling under Article 3(2), something that is not covered by the previous law. Ships under 500 Gross Tonnage and domestic vessels are also exempt from the Convention. A criticism of this provision is that 'the environmental impact of recycling an end of life ship has very little, if any nexus with the character of its earlier usage'¹⁴⁰ and so there is essentially no need to exclude such ships, apart from for state protection, from within the scope of the Convention.

The absence of the Prior Informed Consent procedure¹⁴¹ could give rise to the argument that the Hong Kong Convention does not meet or exceed the standards set out in the Basel Convention. The effectiveness of this control may be undermined though by cases such as the Abidjan Disaster where a shipment was accepted as it was originally believed, due to fraudulent PIC forms, to be 'routine slops', but it transpired that it was actually a mixture of hazardous wastes.¹⁴² The Convention does implement 'Ready for Recycling' certificates, a similar mechanism, and requires ships to carry an up to date 'Inventory of Hazardous Materials' on board at all times.

A further comparison made between the two Conventions is the omission of the Basel BAN Regulation. The Hong Kong Convention instead recognises that a ban on movement of vessels for recycling to lesser developed countries would act as a detriment to their economy and affect them in many other ways,¹⁴³ although there is some control in the requirement that ship recycling facilities are approved and are within countries that are parties to the Convention. NGO's have claimed however that this failure will 'legalize hazardous practises', stepping away from achievements made by the Basel Convention.¹⁴⁴

In Bangladesh and India the system may be subject to harsher critique: it seems that there is no cohesion, clarity or real control over practices within the yards. Bangladesh's Environmental Law 1995 for example requires 'environmental clearance' certificates provided by the Department of Forest and Environment, yet as of 2017 no shipbreaking yards in the country have obtained one of these certificates.¹⁴⁵ Unfortunately, the issues do not stop there, The Bangladesh Environmental Conservation Act 1995, S.6(D) specifically references

¹⁴⁰ Battacharjee, 'From Basel to Hong Kong' p222.

¹⁴¹ Article 4, Basel Convention.

¹⁴² Alam, Farque, 'Legal Regulation of shipbreaking industry in Bangladesh', p51.

¹⁴³ Battacharjee, 'From Basel to Hong Kong' p226.

¹⁴⁴ Matz-Luck, N., 'Safe and Sound Scrapping of Rusty Buckets? The 2009 Hong Kong Ship Recycling Convention', (2010), *Review of European comparative and international law*.

¹⁴⁵ Alam, Farque, 'Legal Regulation of shipbreaking industry in Bangladesh' p53.

shipbreaking: it requires owners, importers and yard owners to ensure that scrapping happens in a way that does not cause any pollution or health hazards through recycling of hazardous waste. How far this is implemented though is questionable: the yards still practise the beaching method of recycling, which would seem to contravene the Act.

It appears that despite the introduction of the Ship Breaking Rules 2011 there remains little any real control. Alam and Farque have observed that the 'enactment of these rules would represent a crucial step towards the coherence of the domestic legal regime governing shipbreaking... and would mitigate the fragmentation of responsibility by the Bangladesh Government'.¹⁴⁶ The rules provide detailed information on certificates to be obtained and approved recycling methods, as well as acknowledging the authority of international laws. However, the Government has made no real step in implementing the rules and as already suggested are turning a blind eye to many of the issues created because of the industry's economic value.

The courts have consistently favoured improving the situations in both India and Bangladesh. They have attempted to introduce consistent laws that represent the ideals of international law, but again the final implementation of the judgments are often too weak to make any difference. It seems that the people running the shipbreaking industry in these countries operate beyond the law. Examples can be seen in cases such as *Bela v Bangladesh and others*,¹⁴⁷ where the judge ruled that all yards should be closed if they could not produce the relevant certificates required by law, yet no yards have been closed. In India the courts have suggested clear guidelines and called for stronger laws but their efforts seem to have been ignored.

Enforcement is a major issue in both countries, illustrated in the case of 'Riky'¹⁴⁸ which involved a vessel being scrapped in India and beached despite the fact that the ship was considered hazardous. It was the responsibility of the Indian Ministry of Environment and Forests to prevent situations like this from occurring yet their actions illustrate direct lack of intention to implement both international and domestic law. India also has its own Ship Recycling Regulation but on close inspection it misses out key points that are necessary for the improvement of the industry. The rules do acknowledge the need for training and safety equipment on the yards yet the extent of this is down to discretion of the Chief Inspector of

¹⁴⁶ Ibid, p21.

¹⁴⁷ Ibid, p48.

¹⁴⁸ Oase, 'Implications of the Hong Kong Convention'.

Factories which leaves it open to abuse. Likewise, there is no mention of the need to phase-out beaching, and there is minimal mention of health care improvements. The Regulation provides no protection for workers who fall ill long after leaving their jobs, but on the plus side it does require the payment of compensation for those injured onsite – again as noted above this too is open to abuse.

The shipbreaking yards in both countries are consistently at odds with the SDG's, with 'economic growth' being the only target that could be viewed as being met at the cost of 'decent work', 'good health and wellbeing' and 'life below water'. In India Goal 8 requires the need to improve skills within the workplace, yet the NSSO¹⁴⁹ have predicted that only around 10% of the Indian workforce have adequate training for their jobs. Both countries have also recognised the need to reduce child labour in the workplace yet in shipbreaking yards there are unacceptably high numbers (10.94%)¹⁵⁰ something that would not be acceptable in the EU. The solution they have come up with is to enrol more children in schooling, although enrolment will not necessarily solve the issue as many children are forced into work in order to survive. In the UK child labour laws prevent children from being employed below the ages of 13, and even when they are eligible for a job there are provisions in place to ensure that they do not partake in full time work and are paid a fair amount; although situations in LDC's are very different to those here more must be done to prevent the exploitation of child labour, especially in such a dangerous sector.

Conclusion

The need to reform the industry is more important now than ever, shipbreaking in third world countries like India and Bangladesh is having a seriously harmful effects both environmentally and socially and without change this will only worsen. The ILO labelled ship recycling as one of the most dangerous jobs in the world¹⁵¹ and rightly so. Suggestions for a ship recycling fund have been presented many times amongst academics;¹⁵² the idea would be to tax shipping companies in order to fund new development within shipbreaking countries, the rates would be determined by the IMO and based on the size of ship and work required to recycle the

¹⁴⁹ SDG report, http://niti.gov.in/writereaddata/files/Report_SDG-8.pdf, March 2017

¹⁵⁰ Achieving the Sustainable Development Goals in India - A Study of Financial Requirements and Gaps, http://www.devalt.org/images/L3_ProjectPdfs/AchievingSDGsinIndia_DA_21Sept.pdf?mid=6&sid=28, March 2017.

¹⁵¹ International Labour Organisation, 'Shipbreaking: A Hazardous Work', http://www.ilo.org/safework/info/WCMS_110335/lang--en/index.htm, February 2017.

¹⁵² Vedeler, K., 'From cradle to grave – Value Chain Responsibility in the Ship Scrapping Industry' *Master Thesis, Norwegian School of Economics and Business*, (2006).

vessel in an environmentally sound manner.¹⁵³ Unfortunately, the plans have already been rejected by the parties who created the Hong Kong Convention.

It is important to recognise that the Supreme Courts of both countries deserve praise for their efforts to reform and implement change within the industry; rulings such as those in *Research foundation for Science Technology National Resource Policy v Union of India and Anr* and *Research Foundation for Science Technology and Natural Resource Policy vs Union of India and Ors* illustrate a clear understanding for the urgency of reform. Unfortunately, the industry is one that is set in its ways and the legal systems in place provide a completely inadequate response to the situation. Adequate shipbreaking regulation within India and Bangladesh will only come about once there is a single set of rules/governing bodies for the industry and as the business is continuously growing this is something they should be looking to do immediately. Alongside the domestic regulations 'there is a need for a system of international supervision of the industry that can balance the concerns of environmentalists with the economic benefits of shipbreaking'¹⁵⁴ and with some tweaking and the required amount of signatories the Hong Kong Convention could provide this.

Solutions to the issues that arise in shipbreaking yards are numerous: whether any of them will work is open to question. The industry is relentless in maintaining these dangerous practices and the only way this can change is if the attitudes of those in charge change with it. Third world governments must act in order to improve the situation, 'time and time again, governments... the recyclers and ship-owners have taken refuge behind a hollow proposition that since more than half a million people from this region depend on ship scrapping for a living'¹⁵⁵ introduction of new practices would act in their detriment rather than their favour; yet a change is exactly what is needed here to create a safer, sufficiently economical and environmentally sustainable system.

¹⁵³ Puthucherril, *From Shipbreaking to Sustainable Ship Recycling*, p205.

¹⁵⁴ Battacharjee, 'From Basel to Hong Kong'), p204

¹⁵⁵ Puthucherril, *From Shipbreaking to Sustainable Ship Recycling*, p200.